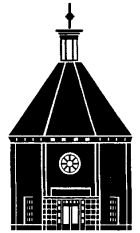


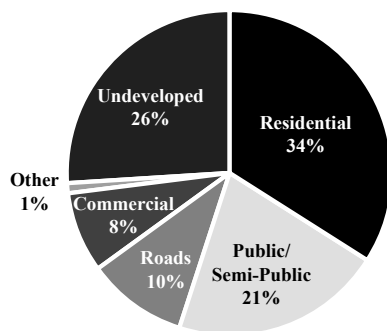
Fact Sheet and Glossary

TOWN OF LEESBURG ENVIRONMENTAL VISIONING SESSION
September 13, 2003



Demographics

- **Land Area:** 11.74 square miles.
- **Housing Units:** 10,671 (2000 Census).
- **Housing Type:** 45% single-family detached.
- **Home Ownership:** 68% owner-occupied.
- **Transiency:** 61% of current residents lived in a different home in 1995.
- **Commuting:** 82% drive alone; 10% carpool; 5% work at home; 2% walk to work.

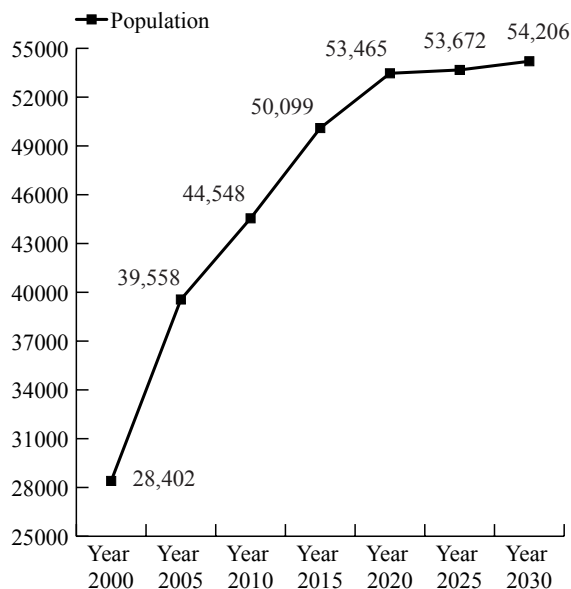


Land Uses (2001)

From Urban Growth Area Development Plan Study, November 2001.

One Scenario for Leesburg's Population Growth

From the Loudoun County 6.3 Model. This is one of several projections, each of which use different growth assumptions.



Water Quality

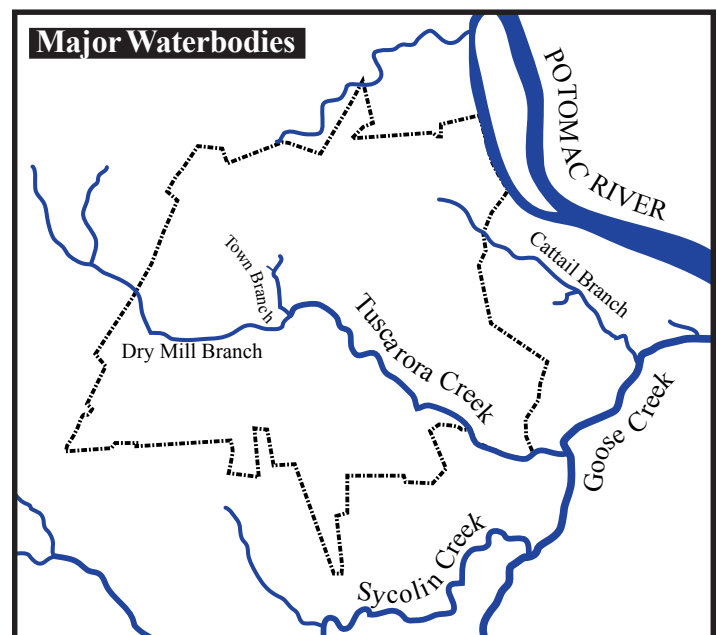
WATER QUALITY FACTS



- **Water Pollution:** Three streams are considered impaired by the U.S. EPA for fecal coliform bacteria (Sycolin Creek, Goose Creek, and South Fork Sycolin Creek).
- **Water Quality Monitoring:** Virginia DEQ monitors over 140 different stream quality parameters at its station on Tuscarora Creek near the confluence with Goose Creek.
- **Impervious Surface Cover:** Approximately 35% of the Town is covered with roads, parking lots, rooftops, and other impervious surfaces.
- **Impact of Impervious Surfaces on Water Quality:** Watersheds with impervious cover of greater than 25% typically do not support a diverse stream community.*
- **Drinking Water:** Leesburg's drinking water comes from the Potomac River and is produced by the Town's Department of Utilities.

WATER QUALITY TOOLS

- **Town Plan:** Contains guidance and policy, not regulation, on a wide range of environmental issues.



*Center for Watershed Protection.

- **Zoning Ordinance:** Regulates land use. Requires a buffer area around any perennial stream with a drainage area of 640 acres or more.
- **Subdivision and Land Development Regulations:** Contain requirements for storm drainage systems, erosion and sediment control, tree preservation, slope preservation, and flood control.
- **Stormwater Management Master Plan:** Addresses Town-wide flood control and stormwater management issues, including regional flood control facilities.
- **NPDES Phase II Stormwater Management Plan:** Outlines how the Town will reduce stormwater pollutants to the “maximum extent practicable” to meet the federal Clean Water Act NPDES requirements.
- **Erosion and Sediment Control:** A State-mandated program to reduce erosion at a development site during and after construction. Loudoun County administers Leesburg’s program.

PROGRAMS AND REGULATIONS

- **Clean Water Act (CWA):** The primary federal tool for regulating water quality. Major provisions affecting Leesburg are TMDLs and NPDES Phase II.
- **Total Maximum Daily Load (TMDL):** A pollutant budget set for any stream segment that violates water quality standards. Part of the CWA.
- **National Pollutant Discharge Elimination System, Municipal Separate Storm Sewer System (NPDES MS4):** Requires local governments in urbanized areas to reduce pollution to the “maximum extent practicable” using six minimum control measures. Part of the CWA.
- **Chesapeake Bay Agreement:** A series of agreements entered into by Virginia, Maryland, Pennsylvania, DC, and the EPA to voluntarily improve the health of the Chesapeake Bay. The 2000 Agreement lays out a multi-step plan for cleaning up the Bay by 2010.
- **Tributary Strategy:** A watershed-specific plan for achieving the goals of the Chesapeake Bay Agreement. Leesburg is in the Potomac River watershed.

Air Quality

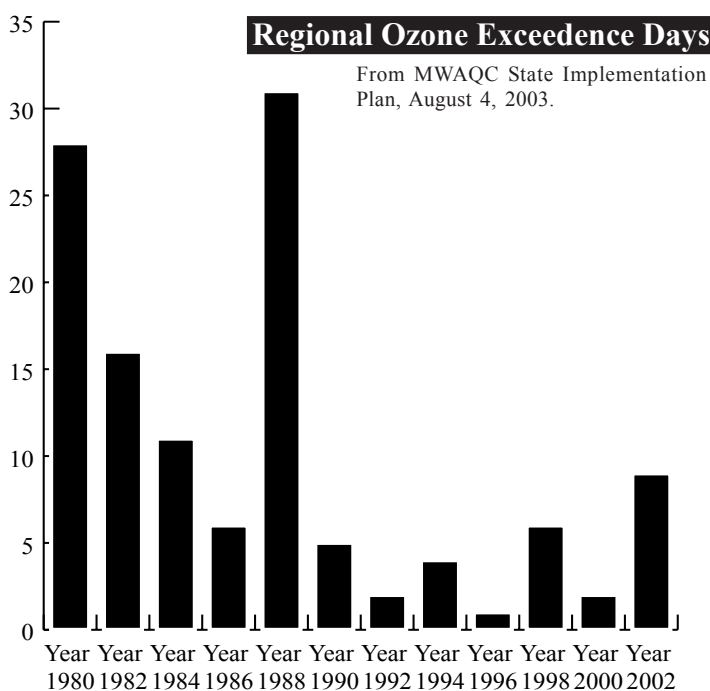


AIR QUALITY FACTS

- **Air Pollution:** The Washington DC region is considered a “severe” nonattainment area for ground-level ozone. Severe is the second worst designation.
- **Air Quality Monitoring:** Air quality in Loudoun is monitored near Ashburn. Air is tested for carbon monoxide, lead, nitrogen dioxide, ground-level ozone, particulate matter, and sulfur dioxide.
- **Causes of Ground-Level Ozone:** Ground-level ozone is formed when nitrogen oxides (NOx) and volatile organic compounds (VOCs) react to sunlight.

PROGRAMS AND REGULATIONS

- **Clean Air Act:** The primary federal tool for regulating air quality. The CAA was amended in 1990 to require specific emissions reductions for areas exceeding national air quality standards.



Sources Contributing to Ground-Level Ozone	VOCs	NO _x
Point sources such as power plants and factories.	5%	22%
On-Road sources such as cars and trucks.	27%	49%
Non-Road sources such as construction equipment, lawn and garden equipment, and recreational watercraft.	20%	17%
Area sources such as trains, aircraft, bakeries, dry cleaners, open air combustion, and alcohol or petroleum based consumer products.	48%	12%

- **State Implementation Plan (SIP):** The primary planning tool for how a region will attain air quality standards.
- **Metropolitan Washington Air Quality Committee (MWAQC):** The body responsible for developing the SIP for the Washington DC metropolitan area.
- **One-Hour Ozone Standard:** Maximum allowable quantity of ground-level ozone during a given hour, set by the U.S. EPA as 120 parts per billion.

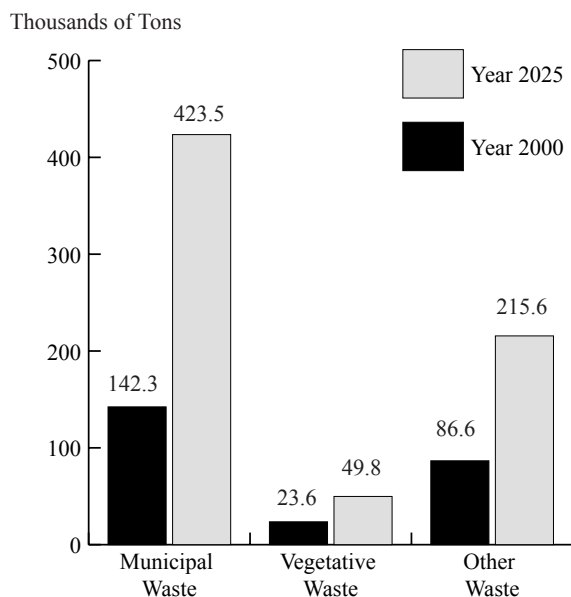
Waste and Recycling

- **Waste Management:** Leesburg contracts out waste pick-up to a private hauler.
- **Planning:** Leesburg belongs to the Loudoun County Solid Waste Management District. Under State law, the district is in the process of adopting a new Solid Waste Management Plan.
- **Waste Generation:** Total waste generation in Loudoun County will increase 172% between 2000 and 2025.
- **Automotive Waste:** Loudoun County generated 534,000 gallons of used oil and 67,000 gallons of antifreeze from automobiles in 2000.
- **Recycling Rates:** Loudoun County's 2002 reported recycling rate was 28% -- down from a high of 33% in 1998. The State mandated recycling rate is 25%.
- **Disposal:** Loudoun County has one public landfill; although only 9% of the County's waste goes to the landfill. The rest is landfilled or incinerated out of the County.



Waste Generation Projections

Loudoun County



Environmental Glossary

WATER RESOURCES

Benthic: That portion of the aquatic environment inhabited by organisms that live permanently in or on the bottom.

Best Management Practice (BMP): Structural or nonstructural practices designed to minimize the impacts of change in land use on surface and ground water systems. Common BMPs include dry detention ponds, wet detention ponds, bioretention facilities, filter strips, and sand filters.

Bioretention: The use of vegetation to allow infiltration of runoff into the ground. Also known as "rain gardens."

Dissolved Oxygen (DO): The amount of oxygen freely available in water and necessary for aquatic life. Water quality standards state that streams in Leesburg should have a DO content of 5 milligrams per liter.

Fecal Coliform Bacteria: A group of organisms common to the intestinal tracts of humans and animals. The presence of fecal coliform bacteria is an indicator of potentially dangerous bacterial contamination.

Floodplain: An area adjacent to a stream where water from the stream overflows its banks at some frequency during storm events. A 100-year flood is a flood with a 1 percent chance of being equalled or exceeded in any given year.

Greywater: Wastewater from washing machines, showers, bathtubs, hand washing, etc. that may be used for some direct re-use such as irrigation water or toilet water.

Groundwater Recharge Area: Areas of land that allow groundwater to be replenished through infiltration or seepage from precipitation or surface runoff.

Headwater: The area where a stream begins; usually a network of small tributaries at higher elevations.

Impaired Stream: An aquatic system in which the water quality is degraded. Typically used to describe a stream that is no longer fishable or swimmable under State standards.

Nonpoint Source Pollution: Contaminants such as sediment, nitrogen, phosphorus, hydrocarbons, and heavy metals whose sources cannot be pinpointed but rather are washed off from the land surface by stormwater runoff.

Parts Per Billion: A ratio used to describe the proportion of one substance to another. In terms of time, 1 ppb is equal to one second in 32 years.

Perennial Stream: A body of water that normally flows year around in a defined channel, and is capable, in the absence of pollution or other man-made disturbances, of supporting aquatic life.

Runoff: Water from rainfall or snowmelt that flows across the surface instead of infiltrating into the ground.

Scenic Rivers: Designation placed on rivers of particular historic or scenic value by the Virginia Board of Conservation and Recreation. The entirety of Goose Creek and a segment of Catoctin Creek, north of Waterford to the Potomac, have been designated as State Scenic Rivers. However, the State Scenic River designation does not bring with it any protection.

Stormwater Management Facility: A device that controls stormwater runoff, including but not limited to, the quantity, quality, the period of release or the velocity of flow.

Thermal Pollution: A reduction in water quality caused by increasing its temperature -- often caused when runoff absorbs heat from impervious surfaces such as parking lots and roof tops.

Watershed: The land area that contributes water to a specific waterbody.

Water Table: The top of the uppermost aquifer. The depth fluctuates with climate conditions and follows a subdued version of the land surface topography.

Wetland: A vegetated ecosystem where water is a dominant factor in its development and existence.

GEOLOGY AND SOILS

Diabase: A dark-colored intrusive rock resulting from near-surface magma. Diabase is associated with shrink-swell soils.

Karst Topography: Topography with sinkholes, caves, and underground drainage that is formed in limestone, gypsum, or other rocks by dissolution.

Limestone: A sedimentary rock composed primarily of calcite. Much of the northern and western portions of the Town are underlain with limestone.

Hydric Soils: Soils that are wet long enough to periodically produce anaerobic conditions, thereby influencing the growth of plants. Typically associated with wetland areas.

Radon: A colorless, odorless, tasteless radioactive gas that is formed during the natural breakdown of uranium in soil, rock, and water. Radon can seep into a home through cracks in the foundation.

Sedimentation: The process by which suspended solids, such as soil particles, settle out of the water column.

Shrink-Swell Soils: Soils that swell when wet, and shrink when dry, causing damage to foundations and building footings. In Leesburg, these soils are associated with diabase rock outcrops in the southeast part of the Town and along Route 7 east.

Sink Hole: A depression formed either by solution of the surficial bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Steep Slopes: Highly steep slopes are considered greater than 25%. Moderately steep slopes are considered between the 15 and 25% range.

PARKS AND RECREATION

Greenway: A continuous system of open spaces such as parks and privately owned natural areas.

Potomac Heritage Trail: Proposed 704-mile trail designated by an act of Congress in 1983. The trail will trace outstanding natural and cultural features of the Potomac River in Virginia, Maryland, Pennsylvania and DC. Portions of the trail are planned for Loudoun County along the Potomac River.

Scenic Corridor: A viewshed that contains scenic vistas linking natural and cultural resources.

AIR, NOISE, AND LIGHT

Light Pollution: The emission of artificial light into areas where it is unneeded or unwanted.

Light Trespass: Light that shines into neighboring properties or is of an undesirable or obtrusive nature.

Noise Abatement: The lessening of sound pressure levels due to noise mitigation measures such as a muffler or a noise barrier.

Noise Contours: A continuous line or contour that represents a particular noise level. Noise contours can be used to visually represent the total noise impact from a site such as an airport.

Nonattainment Area: A geographic area in which the level of a criteria air pollutant is higher than the level allowed by federal standards.

NOx: Nitrogen oxides are produced from burning fuels, including gasoline and coal, and are a major component of acid rain.

Ozone: A gas that consists of three oxygen atoms stuck together. Ozone is a main component of smog and is formed at the ground level when VOCs and NOx react to strong sunlight.

Volatile Organic Compound: A large family of chemicals including all organic compounds (containing hydrogen and carbon) that vaporize at room temperature and pressure. They are found in many indoor sources including common products and materials.

ENERGY CONSERVATION

Green Building: Building philosophy with the goals of minimal resource consumption and environmental impact combined with maximum indoor environmental quality.

LEED Standards: The U.S. Green Building Council's Leadership in Energy and Environmental Design program. LEED is a self-assessing system designed to evaluate environmental performance from a "whole building" perspective over a building's life cycle.

WASTE AND RECYCLING

Brownfield: Abandoned, idled, or under-used properties where expansion or redevelopment is complicated by real or perceived environmental contamination.

Construction and Demolition Debris (C&DD): Waste generated by construction and demolition of buildings, such as bricks, concrete, drywall, lumber, etc.

Household Hazardous Waste (HHW): Products used in residences, such as paints and some cleaning compounds, that are toxic to living organisms and/or the environment.

Municipal Solid Waste (MSW): All solid waste generated in an area except industrial and agricultural wastes.

Waste-to-Energy (WTE): A facility that uses solid waste materials (processed or raw) to produce energy.

AGENCIES

FEMA: Federal Emergency Management Agency

NFIP: National Flood Insurance Program

DEQ: Virginia Department of Environmental Quality

LSWCD: Loudoun County Soil and Water Conservation District

USGS: U.S. Geological Survey

MWAQC: Metropolitan Washington Air Quality Committee

USACE: U.S. Army Corps of Engineers

DCR: Virginia Department of Conservation and Recreation

CBLAD: Chesapeake Bay Local Assistance Department

EPA: United States Environmental Protection Agency